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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,736	06/23/2000	Ove Strandberg	59864.00634	1504

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SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER	
HO, CHUONG T	
ART UNIT	**PAPER NUMBER**
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/599,736	STRANDBERG ET AL.	
	Examiner	Art Unit	
	CHUONG T. HO	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 21-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,21-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

1. The amendment after non-final rejection filed 01/29/07 have been entered and made of record.

2. Applicant's arguments with respect to claims 1-9, 10-18, 19, 21-27, 28, 29, 30 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 1-9, 10-18, 19, 21-27, 28-30 are pending.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2-3, 4-9, 10-11, 12-13, 14-18, 19, 21, 22-26, 27, 28, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pashtan et al. (U.S.Patent No. 6,631,122 B1) in view of Barri et al. (U.S.Patent No. 6,657,962 B1) and in further view of Reininger et al. (U.S.Patent No. 6,404,738).

Regarding to claims 1, see figure 3, Pashtan et al. discloses such network element are normally network traffic router elements and network edge elements (col. 1, lines 15-16); (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and

dropper to shape the data traffic flow according to a profile) (col. 3, lines 28-30, to minimize excessive global management control, the global traffic conditioning control may be based on a min/max analysis to find the largest congestion relief with minimum adjustment at the network elements); (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow); comprising:

- Determining (communication traffic flows) an operating condition at a first router in a differentiated service network having a plurality of router based on evaluation of incoming packets and computation of an effective load (col. 3, lines 29-30, traffic congestion) by each of the plurality of routers based on evaluation of incoming packets and computation of an effective load by each of the plurality of routers (figure 3, network elements 310, 390) (figure 4, network elements 412, 421, 422) (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 5, lines 54-55, while monitoring the communication traffic flow from mether 511 may send a request to a network element upstream from the network element 50 to change priority level of the micro communication flow) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network

elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow);

- propagating an indication of operating condition at first router (figure 4, network element 422 to network element 412) to a second router (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow), wherein a signal indicating at least network traffic status (communication flow) is sent from each of the plurality of routers (figure 3, network elements 310, 390) to a bandwidth broker (figure 3, network management 330), the signal of the operating condition of the first router being reflected in the indication (abstract, network (300) collects performance data associated with each network element, passes the performance data associated with each network element to a network management element 330), creating a global traffic conditioning control , communicates the global traffic conditioning control to at least one of the plurality of network element);
- Adjusting at least one parameter of constraint of incoming traffic based on indication (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow) ;

- Wherein adjusting comprising performing parameter mapping (see col. 2, lines 52-55, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and shaper and dropper to shape the data traffic flow according to a profile) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow).

However, Pashtan et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Pashtan, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Pashtan with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a

network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Pashtan – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Pashtan, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Pashtan – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

4. Regarding to claims 10, 11, see figures 2, 3, Pashtan et al. discloses such network element are normally network traffic router elements and network edge elements (col. 1, lines 15-16); (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 3, lines 28-30, to minimize excessive global management control, the global traffic conditioning control may be based on a min/max analysis to find the largest congestion relief with minimum adjustment at the network elements); (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow); comprising:

- receiving, at a second router (network element 412), an indication of an operating condition at a first router (network element 422) in a differentiated service network having a plurality of routers (network elements 412, 421, 422), wherein the operating condition is determined in the first router based on evaluation of incoming packet and computing of an effective load by each of the plurality of routers (figure 3, network elements 310, 390) (figure 4, network elements 412, 421, 422) (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection

of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 5, lines 54-55, while monitoring the communication traffic flow from mether 511 may send a request to a network element upstream from the network element 50 to change priority level of the micro communication flow) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow); and

- wherein a signal indicating at least network traffic status is sent from each of the plurality of routers to a bandwidth (network management 330), the signal of the operating condition of the first router being reflected in the indication (abstract, network (300) collects performance data associated with each network element, passes the performance data associated with each network element to a network management element 330), creating a global traffic conditioning control , communicates the global traffic conditioning control to at least one of the plurality of network element);
- Adjusting at least one parameter of constraint of incoming traffic based on indication (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow

adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow) ;

- Wherein adjusting comprising performing parameter mapping (see col. 2, lines 52-55, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and shaper and dropper to shape the data traffic flow according to a profile) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow).

However, Pashtan et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Pashtan, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Pashtan with the teaching of

Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Pashtan – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Pashtan, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Pashtan – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint

or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

5. Regarding to claim 19, figure 3, figure 4, Pashtan et al. discloses a first router (network element 422); a second router (network element 412) coupled to said first router (network element 422); comprising:

- Determining (network flow marking) an operating condition at a first router based on evaluation of incoming packets and computation of an effective load (col. 3, lines 29-30, traffic congestion) by each of a plurality of routers (col. 5, lines 53-55, col. 6, lines 33-35, lines 56-57);
- Wherein said first entity associated with said first router propagates an indication of operating condition at first router to a second router (see col. 6, lines 33-35, lines 57-58);
- Wherein a signal indicating at least network traffic status is sent from each of the plurality of routers to a bandwidth broker, the signal of the operating condition of the first router being reflected in the indication (abstract, network (300) collects performance data associated with each network element, passes the performance data associated with each network element to a network management element 330), creating a global traffic conditioning control , communicates the global traffic conditioning control to at least one of the plurality of network element);
- Adjusting at least one parameter of constraint of incoming traffic based on indication (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453,

may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow) ;

- Wherein adjusting comprising performing parameter mapping (see col. 2, lines 52-55, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and shaper and dropper to shape the data traffic flow according to a profile) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow).

However, Pashtan et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Pashtan, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in

the art at the time of the invention to modify the system of Pashtan with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Pashtan – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Pashtan, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Pashtan – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint

or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

6. Regarding to claim 28, see figure 3, Pashtan et al. discloses such network element are normally network traffic router elements and network edge elements (col. 1, lines 15-16); (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 3, lines 28-30, to minimize excessive global management control, the global traffic conditioning control may be based on a min/max analysis to find the largest congestion relief with minimum adjustment at the network elements); (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow); comprising:

- Determining (communication traffic flows) an operating condition at a first router in a differentiated service network having a plurality of router based on evaluation of incoming packets and computation of an effective load (col. 3, lines 29-30, traffic congestion) by each of the plurality of routers based on evaluation of incoming packets and computation of an effective load by each of the plurality of routers (figure 3, network elements 310, 390) (figure 4, network elements 412, 421, 422) (col. 2, lines 50-52, each network element may have an internal traffic

conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 5, lines 54-55, while monitoring the communication traffic flow from mether 511 may send a request to a network element upstream from the network element 50 to change priority level of the micro communication flow) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow);

- propagating an indication of operating condition at first router (figure 4, network element 422 to network element 412) to a second router (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow), wherein a signal indicating at least network traffic status (communication flow) is sent from each of the plurality of routers (figure 3, network elements 310, 390) to a bandwidth broker (figure 3, network management 330), the signal of the operating condition of the first router being reflected in the indication (abstract, network (300) collects performance data associated with each network element, passes the performance data associated

with each network element to a network management element 330), creating a global traffic conditioning control , communicates the global traffic conditioning control to at least one of the plurality of network element);

- Adjusting at least one parameter of constraint of incoming traffic based on indication (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow) ;
- Wherein adjusting comprising performing parameter mapping (see col. 2, lines 52-55, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and shaper and dropper to shape the data traffic flow according to a profile) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow).

However, Pashtan et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Pashtan, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Pashtan with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Pashtan – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

Both Pashtan, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Pashtan – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

Regarding to claim 29, Regarding to claims 10, 11, see figures 2, 3, Pashtan et al. discloses such network element are normally network traffic router elements and network edge elements (col. 1, lines 15-16); (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 3, lines 28-30, to minimize excessive global management control, the global traffic conditioning control may be based on a min/max analysis to find the largest congestion relief with minimum adjustment at the network elements); (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow); comprising:

- receiving, at a second router (network element 412), an indication of an operating condition at a first router (network element 422) in a differentiated service network having a plurality of routers (network elements 412, 421, 422), wherein the operating condition is determined in the first router based on evaluation of incoming packet and computing of an effective load by each of the plurality of routers (figure 3, network elements 310, 390) (figure 4, network elements 412, 421, 422) (col. 2, lines 50-52, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such as a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and a shaper and dropper to shape the data traffic flow according to a profile) (col. 5, lines 54-55, while monitoring the communication traffic flow from mether 511 may send a request to a network element upstream from the network element 50 to change priority level of the micro communication flow) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow); and
- wherein a signal indicating at least network traffic status is sent from each of the plurality of routers to a bandwidth (network management 330), the signal of the operating condition of the first router being reflected in the indication (abstract, network (300) collects performance data associated with each network element,

passes the performance data associated with each network element to a network management element 330), creating a global traffic conditioning control , communicates the global traffic conditioning control to at least one of the plurality of network element);

- Adjusting at least one parameter of constraint of incoming traffic based on indication (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow) ;
- Wherein adjusting comprising performing parameter mapping (see col. 2, lines 52-55, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and shaper and dropper to shape the data traffic flow according to a profile) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow).

However, Pashtan et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Pashtan, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Pashtan with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Pashtan – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM switches. Setup 722 and modification request 721 are made by the server (720) are

made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

- Both Pashtan, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Pashtan – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

7. Regarding to claim 30, figure 3, figure 4, Pashtan et al. discloses a first router (network element 422); a second router (network element 412) coupled to said first router (network element 422); comprising:

- Determining (network flow marking) an operating condition at a first router based on evaluation of incoming packets and computation of an effective load (col. 3, lines 29-30, traffic congestion) by each of a plurality of routers (col. 5, lines 53-55, col. 6, lines 33-35, lines 56-57);
- Wherein said first entity associated with said first router propagates an indication of operating condition at first router to a second router (see col. 6, lines 33-35, lines 57-58);
- Wherein a signal indicating at least network traffic status is sent from each of the plurality of routers to a bandwidth broker, the signal of the operating condition of

the first router being reflected in the indication (abstract, network (300) collects performance data associated with each network element, passes the performance data associated with each network element to a network management element 330), creating a global traffic conditioning control , communicates the global traffic conditioning control to at least one of the plurality of network element);

- Adjusting at least one parameter of constraint of incoming traffic based on indication (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow) ;
- Wherein adjusting comprising performing parameter mapping (see col. 2, lines 52-55, each network element may have an internal traffic conditioning control. Such internal control may be performed by interconnection of one or more blocks such a classifier for classifying an ingress data packets, a meter for measuring performance, a marker for marking the data packets, and shaper and dropper to shape the data traffic flow according to a profile) (col. 6, lines 57-58, a signaling protocol, such as signaling 450-453, may be added between network elements for back propagating traffic flow adjustment requests. The request to adjust the traffic includes information such as the selected micro flows that make up the communication flow).

However, Pashtan et al. is silent to disclosing wherein adjusting comprises resource usage calculation.

Barri et al. discloses system for managing congestion in a network (see abstract); comprising:

adjusting comprises resource usage calculation (see col. 9, lines 33-35, adjustment for the egress flow control in accordance with present invention) (see col. 10, lines 25-38, the weight (resources usage) average is calculated).

Both Pashtan, Barri discloses different class of service. Barri recognizes resource usage calculation. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Pashtan with the teaching of Barri to provide resource usage calculation in order to manage the congestion in a network. Therefore, the combined system would have been enable to timing to transmission of packets out the egress system.

However, the combined system (Pashtan – Barri) is silent to disclosing adjust comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint.

Reininger et al. discloses adjust (see col. 11, lines 30-31, the algorithm now adjusts the bandwidths of A, C, D and V and informs these connections of their new allocation) comprising renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint (see figure 7, col. 8, lines 63-67, FIG.7 depicts application QoS renegotiation across a network that uses ATM signaling.....Soft-QoS controllers 735 and 745 are connected to the ATM

switches. Setup 722 and modification request 721 are made by the server (720) are made by the server to the network. Newly established connection 724 and modification availability 723 are received by the server).

8. Both Pashtan, Barri, and Reininger discloses adjusting network parameters (bandwidth, rates, delay jitter, etc.). Reininger recognizes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Pashtan – Barri) with the teaching of Reininger to provide renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint in order to provide equal bandwidth allocation.

9. In the claims 2, 12, 27, Pashtan et al. discloses first router (422) comprises a core router and second router (412, 421) comprises an edge router (see figure 4, col. 6, lines 57-58).

10. In the claims 3, 13, 21, Pashtan et al. discloses determining an operating condition at a third router (422); and propagating an indication of operating condition at third router to second router (412, 421) (see figure 3, figure 4, col. 6, lines 57-58).

11. In the claim 12, claim 12 is rejected the same reason of claim 2 above.

12. In the claim 13, claim 13 is rejected the same reason of claim 3 above.

13. In the claim 21, claim 21 is rejected the same reason of claim 3 above.

14. In the claim 27, claim 27 is rejected the same reason of claim 2 above.

15. In the claims 4, 14, 24, Pashtan discloses operating condition comprises a status of stability (see col. 6, lines 33-35, as the network is rapidly changing states, backward propagation of request to decrease a DiffServ priority may be met by an upstream network element and the reassigned micro communication flow may then met the QoS objective at the network element where the congestion was originally detected).

16. In the claim 5, Pashtan discloses indication comprises a signal corresponding to a network traffic status (traffic flows, DiffServ values, class of service(see col. 6, lines 57- 65).

17. Regarding to claims 6, 16, Barri discloses network traffic status is represented by a color (see col. 2, lines 53-55, Green, Yellow and Red operating modes are defined to increase data input, reduce data input and reduce data input drastically, respectively).

18. In the claim 7, Pashtan discloses second router (network element 422, 412, 421) making a profile change recommendation to a network operator (the network management element 330) (see figure 3, col. 5, lines 9-11).

19. In the claims 8, 9, Reininger discloses second router renegotiating a constraint of network (see col. 8, lines 63-67).

20. In the claim 14, claim 14 is rejected the same reason of claim 4 above.

21. In the claim 15, claim 15 is rejected the same reason of claim 5 above.

22. In the claim 16, claim 16 is rejected the same reason of claim 6 above.

23. In the claims 17, 18, claims 17, 18 are rejected the same reason of claims 8, 9 above.

24. In the claims 22, 23, claims 22, 23 are rejected the same reason of claims 8, 9 above.

25. In the claim 24, claim 24 is rejected the same reason of claim 4 above.

26. In the claim 25, claim 25 is rejected the same reason of claim 5 above.

27. In the claim 26, claim 26 is rejected the same reason of claim 5 above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoki (U.S.Patent No. 2002/0073147);

Vaid et al. (U.S.Patent No. 6,047,322);

Chiu (U.S.Patent No. 6,973,033);

Patel et al. (U.S.Patent No. 6,865,185) ;

Chiang et al. (U.S.Patent No. 6,594,277);

Ash et al. (U.S.Patent No. 6,590,867) ;

Chiu et al. (U.S.Patent No. 6,744,767).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

04/11/07

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600